THE WEAK FORM EFFICIENT MARKET HYPOTHESIS IN THE NIGERIAN STOCK MARKET: AN EMPIRICAL INVESTIGATION

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ABSTRACT

The study empirically examined the presence of weak form efficiency in the Nigerian stock market using time series data, 1985-2014. The data used to conduct this research is the All Share Index (ASI) converted to stock market returns. Time series econometrics techniques were conducted for the analysis. The study reveals that the large differences between the Mean and Standard deviation of the variables in the descriptive statistics suggest that the stock market is highly risky. The study shows that in the recent period, 2011 to 2014, it is found that stock returns are normally distributed. The results of the test of serial independence or randomness as obtained from Runs ADF tests show that in periods 1985 to 1992, 1993 to 1999, 2000 to 2010 and the whole period 1985 to 2014, the Nigerian stock market is dependent and not random thus inefficient, which indicate that investor can predict the markets returns. However, stock returns for period 2011 to 2014, market follow random walk, so investor cannot predict the market returns in the period. Finally, the result shows that previous stock market return has 15% positive relationship, and 0.23 0.23% predictive powers. Thus the study concluded that the NSE was not efficient in the weak form between 1985 and 2010, however, it has become efficient from 2011 up to 2014.

Keywords: Presence, Weak, Form, Efficiency, Nigerian, Stock and Market.

INTRODUCTION

Stock market is an organized market for buying and selling financial instruments known as securities which includes stocks, bonds, options and futures. Most stock markets have a specific location where the trades are completed known as stock exchanges. For a company to be traded at these exchanges, it must be listed, and for it to be listed, it must satisfy certain requirements. Stock market plays a crucial role in cementing the relationship between investors and the corporate sector. In this process, they help in mobilizing the savings of people and direct them to the growth of trade, commerce and industrial sectors of an economy.

The efficiency of the emerging markets assume a greater importance as the trend of investment is accelerating in these markets as a result of regulatory reforms and removal of other barriers for the internationally equity investments. The term market efficiency is used to explain the relationship between information and share in the capital market literature. . One way to measure the efficiency of the market is to ask what types of information, encompassed by the total set of all available information, are reflected in securities prices.

When we talk about market efficiency, we are interested not in the form of structural relationship between risk and expected return but rather in the precision with which the market securities relate to its structure. If new information becomes known about a particular company, how quickly do the prices of securities adjust to reflect the new information? If prices respond to all relevant new information in a rapid fashion, we can say the market is relatively efficient. If, instead, the information disseminates rather slowly throughout the market, and if investors take time in analyzing the information and reacting, and possibly overreacting to it, values may deviate from values based on a careful analysis of all available relevant information. Such a market could be characterized as being relevantly inefficient.

The characteristics of an efficient security market include: (1) Security prices respond rapidly and accurately to new information; (2) Trading rules fail to produce superior returns in simulation experiments; (3) Professional investors fail to produce superior returns individually or as a group; and (4) Changes in expected returns are driven by time varying interest rates and risk premia. The combined effect of information coming in a random, independent fashion and numerous competing investors adjusting stock prices rapidly to reflect new information means that one would expect price changes to be independent and random. Since the current prices fully reflect all available information then they are consistent with the risk involved.

Fama (1970) in the Efficient Market Hypothesis (EMH), categorized the market efficiency into three levels based on the definition of the available information set namely, the weak form EMH, the Semi strong form EMH, and the Strong form EMH. In the weak form, only the past information on prices of shares are reflected, in the semi strong form, it reflects all publicly available information in securities prices, iincluding the past securities prices and the announcements of dividend payments, changes in capital structure, change of management and other event; while the strong form captures ALL information be it external, internal and even unannounced.

REVIEW OF RELATED LITERATURE

Theoretical Framework

Theory of market efficiency or the efficient market hypothesis provides an appropriate theoretical framework for the study. According to the theory, share prices on the market place react fully and instantaneously to all information available (Fama, 1991). According to the Efficient Market Hypothesis(EMH), an operationally efficient stock market is expected to be externally and informationally efficient; thus security prices at any point in time are an unbiased reflection of all the available information on the security's expected future cash flows and the risk involved in owning such a security (Reilly & Brown,2003). Such a market provides accurate signals for resource allocation as market prices represent each security intrinsic worth. Market prices can at times deviate from the securities true value, but these deviations are completely random and uncorrelated.

According to Lo (1997) the market efficiency hypothesis stipulates that price changes are only expected to result from the arrival of new information. Given that there is no reason to expect new information to be non-random, period-to-period price changes are expected to be random and independent. In other words, they must be unforecastable if they are properly anticipated, that is, if they fully incorporate the expectations and information of all market participants. It is expected that the more efficient a market, the more random the sequence of its price movements, with the most efficient market being the one in which prices are

completely random and unpredictable. In an efficient market information gathering and information based trading is not profitable as all the available information is already captured in the market prices. This may leave investors with no incentive as to the gathering and analyzing of information, for they begin to realize that market prices are an unbiased estimate of the shares' intrinsic worth (Fama, 1965; Lo 1997).

The fundamental analysis approach to security valuation posits that at any point in time, an individual security has an intrinsic value which depends in turn on such fundamental factors as quality of management, state of the firm's industry and returns, rate of return on equity and the general economic outlook. Changes in the values of these variables result in changes in share values which change follow any definite pattern (an outcome of random walk behaviour). The existence of these unpredictable future values of shares caused by changes in values of its fundamentals, to Fama (1965), evidences the existence of efficiency in that stock market; concluding that the actual price of any security in that market at any point in time is always a good estimate of its intrinsic value, or the actual values of the securities wandering randomly about their intrinsic values.

Empirical Review

Obayagbona and Igbinosa (2014) investigated the weak-form market hypothesis in the emerging capital market of Nigeria from January 2006 to December 2011. It uses three tests of randomness based on autoregressive technique to check for the presence or otherwise of autocorrelation in daily stock prices and returns from the Nigerian Stock Market. All the tests including the Z-statistics for both stock prices and their returns show significant indications of dependence in return series and hence, of non-randomness. The overall results suggest that the emerging Nigerian Stock Market is not efficient in the weak form.

Gimba (2012) tested the Weak-form Efficient Market Hypothesis of the NSE by hypothesizing Normal distribution and Random walk of the return series. Daily and weekly All Share Index and five most traded and oldest bank stocks of the NSE are examined from January 2007 to December 2009 for the daily data and from June 2005 to December, 2009 for the weekly data. The empirical findings derived from the autocorrelation tests for the observed returns conclusively reject the null hypothesis of the existence of a random walk for the market index and four out of the five selected individual stocks. In general, it can be concluded that the NSE stock market is inefficient in the weak form. Given the empirical evidence that the stock market is weak-form inefficient, it is believed that anomalies in stock returns could be existent in the market and reduction of transaction cost so as to improve market activities and minimizing institutional restrictions on trading of securities in the bourse were therefore recommended.

Okpara (2010) investigate whether Nigerian Stock Exchange (from the period 1984 to 2006) follows a random walk. To carry out the investigation, the Generalised Autoregressive Conditional Hetroseskedasticity (GARCH) was employed. The results show that the Nigerian stock market follows a random walk and is therefore weak form efficient. However, the years 1987, the period of financial deregulation, 1988 when some public companies were privatised, 1995 the period of internationalisation of the Nigerian capital market and the years 2000 to 2006 recorded persistent volatility clustering suggesting weak form inefficiency in the market for these periods.

Afego (2012) examined the weak-form efficient markets hypothesis for the Nigerian stock market by testing for random walks in the monthly index returns over the period 1984-2009. The results of the non-parametric runs test show that index returns on the Nigerian Stock Exchange (NSE) display a predictable component, thus suggesting that traders can earn superior returns by employing trading rules. The statistically significant deviations from randomness are also suggestive of suboptimal allocation of investment capital within the economy. The findings, in general, contradict the weak-form of the efficient markets hypothesis.

As the movement of stock prices has been found to be random in some capital markets across the world and in others non-random, Nwidobie (2014) further investigated the random walk hypothesis in Nigeria. Analysis of all-price-index (API) data of shares of listed firms on the Nigerian Stock Exchange from January 2000 to December 2012 using the Augmented Dickey-Fuller (ADF) test shows that share price movements on the Nigerian Stock Exchange do not follow the random walk pattern described by Fama (1965), and thus the random walk hypothesis is not supported by findings in the Nigerian capital market. Results also indicate the existence of market inefficiencies in the Nigerian capital market necessitating the inflow of cheap and free information about security fundamentals into the market for share pricing by the forces of demand and supply.

Samuel and Oka (2010) appraised the nature and efficiency of the Nigerian capital market and its implications for investment analysis and performance. It further examined the implications of the efficient-market hypothesis and types and levels of market efficiency. Data was collected using a survey questionnaire. A multi-stage and random sampling technique was used to select a sample including four categories of people and firms relevant to the study. Data were analyzed using a Likert scale and descriptive statistics. The null hypothesis was analyzed using a five-point Likert scale with a 5% error term, and the study found that information has contributed to the efficiency of the Nigerian capital market to a great extent. It is therefore suggested that the Nigerian Stock Exchange and the Nigeria Securities and Exchange Commission should be more purposeful and aggressive in educating and enlightening the investing public on the workings and technicalities of the market while also committing to continuous training and retraining of their staff.

Osazevbaru (2014) tested for the presence or otherwise of volatility clustering in the Nigerian stock market. Using time series data of share prices for the period 1995 to 2009, the Autoregressive Conditional Heteroscedasticity (ARCH) model and Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model were estimated. The estimates indicate that the market exhibits volatility clustering. The rate at which the response function decays is found to be 1.1783 and quite high. It is suggested that aggressive trading on a wide range of securities be encouraged as this will increase market depth and hence reduce volatility.

Simons and Laryea (2015) investigated the weak form of the efficient market hypothesis for four African stock markets – Ghana, Mauritius, Egypt and South Africa. The results of both parametric and nonparametric tests (Kolmogrov-Smirnov (KS) Goodness of Fit Test, Runs Test, Auto-Correlation Test, Variance Ratio Test) show that the South African stock market is weak form efficient, whereas that of Ghana, Mauritius and Egypt are weak form inefficient. This implies that successive security returns on the South African market are independent and follow a random walk. The same cannot be said of the other three markets. Consequently, we also fitted an ARIMA model to the excess return data for Ghana, Mauritius

and Egypt using the Box-Jenkins method. The ARIMA models are then used to generate one-period ahead forecasts for the subsequent 12 periods for these three countries. The ARIMA forecasts in all three countries outperformed the naïve model, corroborating our initial inefficiency results from the earlier tests.

Udoka (2012) assessed the degree of information efficiency of the market and to suggest measures that could enhance market efficiency in Nigeria,with the help of monthly time series data and tested using the ordinary least square estimate procedure. The proposition was that for any of the parameters LSMP (-1), LSMP (-2), LSMP (-3) LSMP (-6) to be statistically significant, the market was weak-form efficient. Finding resulting from test of data has shown that the Nigerian Stock Market is weak-form efficient.

Ezepue and Omar (2012) explored the weak-form efficient market hypothesis for the Nigerian Stock Market is using different statistical tests including Runs Test, Autocorrelation Function Test, Ljung-Box Q-Statistics (Box-Pierce Q [BPQ] Test), BDS (Brock-Dechert-Scheinkman) Test for Independence of Returns. The analyses use overall stock market returns collected over the period 2000–2010. It is shown that the NSM is not weak-form efficient which questions the benefits of the 2004 financial reforms. It is also shown that the degree of market inefficiency varies across the periods corresponding to the financial reforms and 2007 global financial crisis, for daily and monthly returns.

Kumar and Singh (2013) investigated to know that whether Indian stock Market is efficient or inefficient particularly at weak level. The data employed was the daily closing values of the S&P CNX Nifty and CNX Nifty Junior for the sample period of 1 January 2000 to 31 March 2013, tested with Unit Root Test (ADF & PP), Run Test, Kolmogorov-Smirnov (KS) Test. The results showed that Indian Stock markets do not exhibit weak from of market efficiency. Shafi (2014) employed a study period of 11 Years 2003-2013 with NSE (NIFTY) as a bench mark, a host of tests (parametric as well as non-parametric) to test market efficiency in Indian Capital market in the weak-form. Daily return of 50 Nifty Stocks for 11 years yields 2742 which have been utilized for various analysis to test whether Indian Capital Market is efficient in Weak Form or not. All Tests including run tests, autocorrelation tests reveal that Indian Capital Markets are inefficient in the weak form.

Patel, Radadia and Dhawan (2012) investigated the weak form of market efficiency of Asian four selected stock markets. We have taken a daily closing price of stock markets under the study from the 1st January 2000 to 31st March 2011 and also divided full sample in three interval periods, and have applied various test like Runs Test, Unit Root Test, Variance Ratio, Auto Correlation and other test. BSE has given the highest mean returns to the investor followed by SSE Composite and HANGSENG. BSE Sensex could be considered as high risk markets as it has reported the highest Standard Deviation. During the period BSE, HANGSENG and SSE Composite markets showed positive average daily returns except NIKKEI. The Runs Test indicated BSE and NIKKEI markets are weak form inefficient whereas HANSENG and SSE Composite hold weak form of efficiency. The time series for the full as well as sample period didnot have a presence of unit root in the markets understudy. According to Autocorrelation test it is inferred that the equity markets of the Asian region under thestudy remained inefficient for some lag whereas they were efficient for the other lag.

Emenike (2008) examined the Weak-Form Efficient Market Hypothesis across time for the Nigerian Stock Exchange (NSE) by hypothesizing Normal Distribution and Random walk in

periodic return series. Monthly all share indices of the NSE are examined for three periods including January 1985 to December 1992, January 1993 to December 1999, and January 2000 to December 2007. Our Normality tests are conducted using Skewness, Kurtosis, Kolmogorov-Smirnov, and Q-Q Normal Chart; whereas Random walk is tested using the non-parametric Runs test. Results of the Normality tests show that returns from NSE do not follow normal distribution in all the periods. Runs test results reject the randomness of the return series of the NSE in the periods studied. Overall results from the tests suggest that the NSE is not Weak-Form efficient across the time periods of this study. The results however, show that improvements in NSE trading system have positive effect on efficiency. Relaxing institutional restrictions on trading securities in the market and strengthening the regulatory capacities of NSE and Nigerian Securities and Exchange Commission (NSEC) to enforce market discipline were recommended.

Methodology

The study adopts an *ex-post- facto* research design. The study is because the data is based on historical information obtainable from the official records of the stock exchange. This study used the monthly all share index data for the Nigerian stock exchange (NSE). The All share index includes all listings on the exchange. Additionally, we use index prices, rather than individual stock prices, to provide market-wide evidence. The index is in local currency and the data consists of 360observations spanning the period January 1985 to December 2014. The data was sourced from the Central Bank of Nigeria Statistical Bulletin, 2014. The monthly Stock market indicesare converted into stock market returns using the formula below:

$R_{mt}= Ln(P_t / P_{t-1})*100$..... (1)

Where: R_{mt} represents monthly market returns for period *t*, $P_t$and P_{t-1}denote market prices for period *t* and period *t-1* respectively and *Ln* denotes natural logarithm. We use this log transformation to convert our data into continuously compounded rates. This practice is common rather than using discrete compounding.

Model Specification

The study used a simple autoregressive model where the dependent variable is hypothesized to depend on its own past values. This helps to identify the presence or otherwise of autocorrelation in the model. The specified model is as follows:

$y_t = a_0+y_{t-1}b+e_t$.....**(2)**

Where: y = Monthly stock prices or returns which the dependent variable.

e = the residuals. t = Time (monthly in this case), y_{t-1}=Monthly stock prices or returns in the previous year is the independent variable in the above model.a= constant; b = coefficient of the relationship between y and y_{t-1}.

Method of Data Analyses

To check the weak form efficiency of Nigerian Stock Market (ASI), the study has relied on a number of statistical and econometric tools. The study has relied on descriptive statistics, runs test, Augmented Dickey Fuller test, and simple regression test for analyzing the data.

Presentation of Data and Discussion

The data for the study is the monthly All Share Index of the Nigerian Stock Market. The data covers a period of 1985 and 2014; subdivided into clusters. The first cluster is 1985 to 1992 (96 monthly data observations); the second cluster is 1993 to 1999 (84 monthly data observations); the third cluster runs through 2000 to 2010 (132 monthly data observations) while the fourth cluster covers 2011 to 2014 (48 monthly data observations). The essence of the clusters is to find out whether one period is more efficient than other in the Nigerians stock market. In total, the data are 360 observations of the monthly All Share index of the Nigeria Stock Market.

The data from the monthly All Share Index was converted to Stock Market Returns using the formula $R_{mt}= Ln(P_t /P_{t-1})$, where R_{mt} is the monthly market return for period *t*,. The analysis of the study was based on the stock market returns. The ASI and the computed stock market returns are shown on appendix 1.

Table 1: Descriptive Statistics: Monthly returns of NSE All Share Index (ASI)

	stock return (1985 to 1992)	**stock return (1993 to 1999)**	**stock return (2000 to 2010)**	**stock return (2011 to 2014)**	**All Period stock return (1998 to 2014)**
Mean	0.024183	0.018557	0.011726	0.006992	0.015988
Median	0.019800	0.016250	0.006950	0.005150	0.016300
Maximum	0.240400	0.184800	0.323500	0.126100	0.323500
Minimum	-0.230400	-0.185800	-0.365900	-0.102900	-0.365900
Std. Dev.	0.046192	0.049209	0.076966	0.050966	0.060558
Skewness	0.194179	-0.123598	-0.579555	0.155581	-0.499774
Kurtosis	18.96280	6.983453	8.625031	2.914011	10.92941
Jarque-Bera	1009.224	55.75152	181.4148	0.208432	955.4578
Probability	0.000000	0.000000	0.000000	0.901031	0.000000
Sum	2.297400	1.558800	1.547800	0.335600	5.739600
Sum Sq. Dev.	0.200571	0.200984	0.776010	0.122085	1.312868
Observations	95	84	132	48	359

Source: Authors' computation with the use ofE-view 7.0

The descriptive statistics of the stock market returns of the Nigerian Stock Market is presented on Table 1 above. Normality of distribution is one of the basic assumptions underlying the weak-form efficiency (Simons and Laryea, 2006). Thus, if NSE monthly returns follow normal distribution, it means that we cannot predict the future price or returns from the mean of today's price or return. When this happens, we shall conclude that the NSE is weak-form efficient, otherwise, we say that the market is weak-form inefficient. Mean, standard deviation, Skewness, kurtosis, and Jarque-Bera have been used to test the hypothesis of normality of the study. The results show that the returns are not normally distributed.

Mean stock returns are positive with large volatility (standard deviation) for all countries. This suggests that the stock market is highly risky.

Generally, values for skewness (zero) and kurtosis (3) represents that the observed distribution is perfectly normally distributed. The kurtosis coefficient (10.92941) for the whole period (1985 to 2014) is a peaked distribution and negative skewness (-0.499774). Cluster 1 has peaked kurtosis(18.96280) and positive skewness (0.194179), cluster 2 has peaked kurtosis 6.983453 and negative skewness (-0.123598), cluster 3 has peaked kurtosis 8.625031 and negative skewness (-0.579555), while cluster 4 has flat 2.914011kurtosis and positive skewness (0.155581). These show the presence of leptokurtic distribution in cluster 4 and playtykurtic distribution in all the other clusters and the All-time period.

As the value of skewness and kurtosis of stock return series of NSE are not equal to 0 and 3 respectively, this suggests that data are not normally distributed. Though, one may be tempted to accept the null hypothesis for cluster 4 with kurtosis very close to 3, we reject the null hypothesis of normality. From the results of the calculated Jarque-Bera statistics and p-values in the table 2, the p-values for all the indices (except cluster 4) are less than (0.01) at the 1% level of significance imply that the null hypothesis cannot be accepted. Thus, the hypothesis of normal distribution is rejected at the conventional 5% level for all the period, cluster 1, 2 and 3 and accepted for cluster 4. Therefore, this suggests that the returns of the NSE do not follow the theory of random walk.

Table 2: Unit Root Test Augmented Dickey-Fuller (ADF Test)

		At Level with Constant, No trend	
		t-Statistic	P.value
Stock return (1985 to 1992)		-12.45684*	0.0001
Stock return (1993 to 1999)		-3.343005*	0.0160
Stock return (2000 to 2010)		-9.834589*	0.0000
Stock return (2011 to 2014)		-5.618203*	0.0000
All Period stock return (1998 to 2014)		-6.149308*	0.0000
Test critical values:	1% level	-3.501445	
	5% level	-2.892536	
	10% level	-2.583371	

Source: Authors' computation with the use ofE-view 7.0

To further investigate the randomness of the series, theADF test is employed. The ADF is primarily used to check whether a given series is stationary or non-stationary. According to Shafi (2014),"if the series is found to be non-stationary, then the null hypothesis of the market being random will be accepted". He further proposed that the ADF test is given as a t-statistic which is generally negative and that the more negative the t-statistic, higher are the chances of rejecting the null hypothesis. The results give as t-statistic is compared with the critical values calculated at particular level of significance. The test critical values are calculated at 1%, 5%. 10%.If the t-statistic is less than the critical value calculated at a given critical level, the Researcher has to reject the null hypothesis of the series being random.

The Augmented Dickey Fuller t-statistic has the test critical values at 1%, 5% and 10% were equal to -3.501445, -2.892536, and -2.583371 respectively. The t-statistic for Stock return (1985 to 1992) is -12.45684, Stock return (1993 to 1999) is -3.343005, Stock return (2000 to 2010) is -9.834589, Stock return (2011 to 2014) is -5.618203 and All Period stock return (1998 to 2014) is -6.149308. At a significance level of 5%, the null hypothesis of the data

being non-stationary is rejected because the ADF t-statistic is too negative.All in all, both the Unit Root Test (i.e. the ADF test) revealed that the input series of data is not non-stationary and so the null hypothesis of the Nigerian Stock Markets being random has to be rejected.

Table 3: Regression Model for relationship between Future returns and previous returns in Nigerian Stock Exchange

Dependent Variable: STOCKREURNS (y)
Method: Least Squares
Date: 06/16/16 Time: 05:44
Sample (adjusted): 1985M02 2014M11
Included observations: 358 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y_{t-1}	0.154760	0.052359	2.955724	0.0033
C	0.013546	0.003280	4.130209	0.0000

R-squared	0.023952	Mean dependent var	0.016023
Adjusted R-squared	0.021211	S.D. dependent var	0.060639
S.E. of regression	0.059992	Akaike info criterion	-2.783636
Sum squared resid	1.281264	Schwarz criterion	-2.761957
Log likelihood	500.2708	Hannan-Quinn criter.	-2.775014
F-statistic	8.736304	Durbin-Watson stat	2.045314
Prob(F-statistic)	0.003327		

Source: Authors' computation with the use ofE-view 7.0

The result on table 3 shows the relationship between Future returns and previous returns as hypothesised in the model$y_t = a_0+y_{t-1}b+e_t$.....(2)
From the table, the equation of the relationship is:
$y_t = 0.0135+0.1547b$.....(3)
Where: y is the future returns, 0.1547b is the coefficient of the previous return. Thus, the relationship between previous return (y_{t-1})and future return (y) is 0.1547b. This shows that there is a positive relationship between future stock return and previous return. This implies as unit rise in previous month stock return will lead to about 15% rise in the next month return. Also, a unit fall in previous return will lead to 15% in next month return.

The Durbin Watson is 2.04 which indicate that there is no autocorrelation in the mode. Thus we say that the model is sound for predict purposes. The value of the R2 (coefficient of determination) is 0.023and implies that only 0.23% of change in future stock return is explained by previous return. This explanatory power is too low to enable investor to predict the market without risk. However, the t-value is significant at 5%. Also, the F-value is statistically significant at 5%. These indicate that there is a significant positive relationship between previous stock returns and future stock returns in Nigeria. This implies that we can predict future stock returns from previous trends based on 15% positive relationship and 0.23 predictive powers.

CONCLUSION

The findings from the study has shown that the NSE was not efficient in the weak form between 1985 to 2010 but seem to improved into weak form efficient in the recent times 2011

to 2014. This means that share price movements on the Nigerian Stock Exchange which previously do not follow the random walk pattern described by Fama (1965), has improved and is becoming efficient. This indicates that the price changes of the securities were not independent before 2011 and therefore technical analysis was very much viable. The result in the 2011 to 2014 periods suggest Nigerian stock market is no longer easily exploitable, making it difficult for arbitrage portfolios to be constructed based on trading rules in the recent times. That stock market was inefficient between 19985-2010 seem to suggest possible inherent characteristics, such as low liquidity, thin and infrequent trading, and lack of experienced market participants. The finding shows that there is improvement in these characteristics in Nigeria. As it were in the old when the Best strategy would be to identify a value stock and to buy and hold the same for long periods so as to earn fair return on investment, has becomes less obtainable.

RECOMMENDATIONS

To further improve the efficiency of the Nigerian stock market, the following recommendations are preferred: The Securities and Exchange Commission should take a leading role in regulating abnormal financial activities. In the meantime, an inefficient market could suffer over inflated stock prices, speculation, and insider trading, all potentially intensified by herding behaviour. These problems could be addressed by the SEC. Market operators culpable for insider trading offences should be punished to ensure availability of information on securities to the market allowing the free interplay of demand and supply to determine security values as current market values of securities on the NSE reflect available security information. Information security fundamentals should be provided by issuers as at when due for security valuation; Capital market regulators should ensure that information provided in the market are correct; Laws to protect investors and guard against manipulation of information in the Nigerian capital market should be promulgated and enforced.

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Appendix: All Share Index and the Computed Stock Market Returns of quoted companies in Nigeria (1985 to 2014).

SN	Years	ASI	(Pt/Pt-1)	Ln(Pt/Pt-1) (Stock Market Returns)
1	1985	111.30		
2	1986	112.20	1.00809	0.0081
3	1987	113.40	1.0107	0.0106
4	1988	115.60	1.0194	0.0192
5	1989	116.50	1.00779	0.0078
6	1990	116.30	0.99828	-0.0017
7	1991	117.20	1.00774	0.0077
8	1992	117.00	0.99829	-0.0017
9	1993	116.90	0.99915	-0.0009
10	1994	119.10	1.01882	0.0186
11	1995	124.60	1.04618	0.0451
12	1996	127.30	1.02167	0.0214
13	1997	134.60	1.05734	0.0558
14	1998	139.70	1.03789	0.0372
15	1999	140.80	1.00787	0.0078
16	2000	146.20	1.03835	0.0376
17	2001	144.20	0.98632	-0.0138
18	2002	147.40	1.02219	0.0219
19	2003	150.90	1.02374	0.0235
20	2004	151.00	1.00066	0.0007
21	2005	155.00	1.02649	0.0261
22	2006	160.90	1.03806	0.0374
23	2007	163.30	1.01492	0.0148
24	2008	163.80	1.00306	0.0031
25	2009	166.90	1.01893	0.0187
26	2010	166.20	0.99581	-0.0042
27	2011	161.70	0.97292	-0.0274
28	2012	157.50	0.97403	-0.0263
29	2013	154.20	0.97905	-0.0212
30	2014	196.10	1.27173	0.2404

Source: Extract from CBN Statistical Bulletin, 2014 online version (All Share Index on the Nigerian Stock Exchange)